

### SUPPORT FOR THE AMENDMENT

Support for the amendment to claim 1 is found beginning on page 7, lines 18-21 and pages 28 and 29, Table 1. The amended claim 1 is of similar scope to claim 1 as amended on September 21, 2007 which was identified as substantially identical to claim 1 of the JP application. No claim correspondence table is believed to be necessary nor helpful. No new matter would be added to this application by entry of this amendment.

Upon entry of this amendment, claims 1 and 3-10 will remain active in this application.

### REQUEST FOR RECONSIDERATION

The claimed invention is directed to a packaged beverage comprising non-polymer catechins and a carbohydrate containing wt.% equivalent of glucose and a maximum wt.% equivalent of fructose.

Applicants wish to thank examiners Thakur and Weinstein for the helpful and courteous discussion held with their U.S. representative on January 8, 2008. At that time, applicants' U.S. representative argued that wt.% equivalent glucose and wt.% equivalent fructose referred to the wt.% of each monosaccharide present in the composition or in the form of which would provide such a wt.% such as a polysaccharide. Applicants' U.S. representative further argued that a generic description of a sweetener did not suggest a maximum content of only 0.05 wt.% equivalent of fructose.

Increased catechin consumption is desired based on disclosed physiological affects. Concentrations necessary to observe some physiological affects would necessitate consumption of from 4-5 cups of tea, a common source of catechins. Accordingly, beverages containing higher concentrations of catechins are sought. Issues as to astringency and bitterness observed with high catechin containing beverages as well as visual storage stability



have been observed. Accordingly, high concentration containing catechin compositions having good bitterness and astringency stability characteristics and good color storage stability are sought.

The claimed invention addresses this problem by providing a packaged beverage comprising 0.01-1.0 wt.% of non-polymer catechins and 0.001-20 wt.% equivalent of glucose and less than 0.05 wt.% equivalent of fructose at a pH of from 2-6. Applicants have discovered that such a wt.% equivalent of glucose and maximum wt.% equivalent of fructose provides for a catechin containing composition having good bitterness and astringency stability as well as good storage color stability. Such a composition is nowhere disclosed or suggested in the cited references of record.

As evidence of the improved color storage stability of a composition as claimed, the examiner's attention is directed to Table 1 appearing on pages 28 and 29 of applicants' specification. For the examiner's convenience a portion of the data is reproduced below:



[Table 1]

Formulations	Ex. 1	Ex. 2	Ex. 3	Ex. 4
Green tea extract A	1.00	1.00	1.00	3.00
Ascorbic acid	0.030	0.030	0.030	0.030
Citric acid	0.200	0.200	0.200	0.200
Trisodium citrate	0.100	0.100	0.100	0.100
Granulated sugar	-	-	-	-
Fruit sugar	-	-	0.040	-
Glucose	0.900	3.900	4.900	8.900
Dextrin	0.100	0.100	0.100	0.100
Artificial sweetener	5.000	3.000	-	5.000
Sodium chloride	0.050	0.050	0.050	0.050
Potassium chloride	0.020	0.020	0.020	0.020
Flavor ingredient	0.100	0.100	0.100	0.100
Deionized water	Balance	Balance	Balance	Balance
Total amount	100	100	100	100
pH of beverage	3.5	3.5	3.5	3.5
Non-polymer catechins (wt%)	0.220	0.220	0.220	0.680
Oxalic acid/non-polymer catechins ratio	0.010	0.010	0.010	0.010
Oxalic acid/catechins in green tea extract	0.010	0.010	0.010	0.010
Equivalent fructose amount (wt%)	ND	ND	0.04	ND
Equivalent glucose amount (wt%)	1.000	4.000	5.00	9.000
Na content in beverage (mg/100 mL)	47	47	47	47
K content in beverage (mg/100 mL)	44	44	44	108
Long-term drinkability	A	A	A	B
Stability of bitterness and astringency	A	A	A	A
Feeling as the beverage passed down the throat	A	A	A	A
Color tone stability	A	A	A	B



[Table 1 (Cont'd)]

Formulations	Comp. Ex. 1	Comp. Ex. 2	Comp. Ex. 3	Comp. Ex. 4
Green tea extract A	1.00	1.00	1.00	1.00
Ascorbic acid	-	0.030	0.030	0.030
Citric acid	-	0.200	0.200	0.200
Trisodium citrate	0.330	0.100	0.100	0.100
Granulated sugar	-	1.000	-	-
Fruit sugar	5.000	1.500	-	0.040
Glucose	-	1.500	-	25.00
Dextrin	0.100	0.100	-	0.100
Artificial sweetener	-	-	5.000	-
Sodium chloride	0.050	0.050	0.050	0.050
Potassium chloride	0.020	0.020	0.020	0.020
Flavor ingredient	0.100	0.100	0.100	0.100
Deionized water	Balance	Balance	Balance	Balance
Total amount	100	100	100	100
pH of beverage	6.5	3.6	3.5	3.5
Non-polymer catechins (wt%)	0.220	0.220	0.220	0.220
Oxalic acid/non-polymer catechins ratio	0.010	0.010	0.010	0.010
Oxalic acid/catechins in green tea extract	0.010	0.010	0.010	0.010
Equivalent fructose amount (wt%)	5.00	2.00	0.00	0.04
Equivalent glucose amount (wt%)	0.10	2.10	0.00	25.10
Na content in beverage (mg/100 mL)	108	47	47	47
K content in beverage (mg/100 mL)	44	44	44	44
Long-term drinkability	D	B	D	D
Stability of bitterness and astringency	D	D	D	D
Feeling as the beverage passed down the throat	D	C	B	D
Color tone stability	D	C	B	D



Comparative examples 1-4 illustrate compositions containing more than 0.05 wt.% equivalent of fructose or more than 20 wt.% equivalent of glucose. Comparative examples 1 and 2 in which the amount of fructose exceeds the claimed amount displayed a change or substantial change upon storage at 55°C for one month. Comparative example 4 in which the wt.% equivalent of glucose exceeded 20 wt.% also exhibited a significant color change upon storage. Comparative example 3 which did not contain at least 0.0001 wt.% equivalent of glucose demonstrated a significant change in the stability of the bitterness and astringency upon storage for 7 days.

In contrast, examples 1-4 in which the wt.% equivalent of glucose was within the claimed amount of 0.001-20 wt.% and the wt. % equivalent of fructose did not exceed 0.05 wt.% each exhibited a color tone stability of no change or only slight change. In addition, the bitterness and astringency characteristics were also not changed upon storage. Thus, by providing the claimed weight equivalent of glucose and capping the weight equivalent of fructose as claimed, applicants have provided for a color storage stable packaged beverage having bitterness and astringency storage stability. Such a result is nowhere disclosed or suggested in the cited references of record.

The rejection of claims 1, 3 and 5-7 under 35 U.S.C. §102(b) over Ohishi et al., U.S. 2003/0077374 alone and under 35 U.S.C. §103(a) in combination with Shallenberger and further combinations with Kuznicki et al., U.S. 5,681,569, Ekanayake et al., U.S. H001628 H and Broz U.S. 2002/0197376, Tsai, U.S. 4,946,701 and *Teach Me Tea Cha* are respectfully traversed.

None of the cited references disclose or suggest a composition as claimed nor the improved color stability resulting therefrom.

Ohishi et al. has been relied upon for describing the claimed composition. The reference describes a catechin containing beverage which may contain a **sweetener** such as



sugar, glucose, fructose, isomerized liquid sugar, etc. ([0041]), in an amount of 0.05-1 wt.%.

The inclusion of fructose containing carbohydrates such as sugar and fructose fails to disclose or suggest a maximum amount of only 0.05 wt. % equivalent of fructose. In view of the generic disclosure to use fructose containing sweeteners in amounts of up to 1 wt.%, there is no disclosure or suggestion of a composition containing only 0.05 wt.% equivalent of fructose and 0.0001-20 wt.% equivalent of glucose.

As applicants observe an improved color storage stability by selection of a carbohydrate content as claimed, the claimed invention is clearly neither anticipated nor rendered obvious by the cited references and accordingly withdrawal of the rejections under 35 U.S.C. §102(b) and 35 U.S.C. §103(a) are respectfully requested.

None of the secondary references cure the basic deficiencies of the primary reference.

Shallenberger has merely been cited for description of the relative sweetness of lactose relative to glucose and fructose but fails to suggest a carbohydrate content as claimed.

Kuznicki et al. has been relied upon for a disclosure of a beverage that contains tea solids, electrolytes and carbohydrates to provide improved drinkability. The reference fails to disclose or suggest a carbohydrate content as claimed. To the contrary, the reference prefers a concentration of fructose of from 0.05-10 wt.% (column 6, lines 1-3), an amount **exceeding** the claimed limitation of less than 0.05 wt.%. The reference **prefers** an amount of sucrose of from 1-20 wt.%, a concentration which provides 0.5 wt.% equivalent of fructose, an amount exceeding the claimed limitations of less than 0.05 wt.% equivalent. As such, Kuznicki et al. teaches away from the claimed invention.

Ekanayake et al. has been cited for evidence that salts acts as buffers for tea extracts. The reference fails to disclose or suggest a carbohydrate content as claimed. To the contrary, the reference teaches away from the carbohydrate content as claimed by describing an amount of sweetener compared to the sweetness of sucrose of from 1-15 wt.%. Such a



disclosure teaches away from an amount of less than 0.05 wt.% equivalent of fructose. The reference further identifies a preference for the use of high fructose corn syrup (column 7, lines 21-22).

Broz has been cited for the use of sodium and potassium salt that act as buffers to improve the taste of a beverage. The reference fails to disclose or suggest a carbohydrate content as claimed.

Tsai has been cited to describe a package beverage containing at least 300 mg of catechins. The reference fails to disclose or suggest the claimed carbohydrate concentration. To the contrary, the reference provides for a preferred use of high fructose corn syrup and an amount of sweetener to provide a sucrose equivalence of 1- 14 wt.%, a wt.% equivalent of fructose which would exceed the claimed amount of less than 0.05 wt.% equivalent (column 4, lines 22-24 and 52-56).

*Teach Me Tea Cha* fails to disclose or suggest the claimed carbohydrate concentration.

As the cited combination of references fails to disclose or suggest a non-tea beverage having the carbohydrate concentration as claimed, the claimed invention is clearly neither anticipated nor rendered obvious by these references and accordingly withdrawal of the rejections under 35 U.S.C. §103(a) is respectfully requested.

The rejection of claims 1-10 under 35 U.S.C. §112, second paragraph is traversed-in part and has been obviated in-part by appropriate amendment.

Applicants have now amended the claims to recite that the weight percentages are based on the amount of carbohydrate in the packaged beverage.

As to the terms “wt.%, in terms of equivalent glucose amount” and “wt.%, in terms of equivalent fructose amount,” applicants respectfully submit that these terms are sufficiently well understood by those of ordinary skill in the art such that the metes and bound of the



claimed invention would be clear. Page 7, lines 18-21 of the specification describe that the glucose and fructose may be supplied as a mixture or as a carbohydrate which is hydrolysable into glucose and fructose or is capable of forming glucose and fructose in the digestive tract. Those of ordinary skill in the art would readily appreciate that this description describes a wt.% of glucose and a wt.% of fructose which are either present in the composition as monosaccharides or are present in a form which would produce glucose and fructose. Accordingly the metes and bounds of the claimed invention would be clear to those of ordinary skill in the art. In view of applicants' arguments and amendment, withdrawal of this ground of rejection is respectfully requested.

The provisional rejection of claims 1 and 3-10 on the grounds of nonstatutory obviousness-type double patenting over claims 1, 3-5 and 7-8 over copending application 10/582,873 in view of Ohishi et al. is respectfully traversed.

U.S. '873 fails to claim a packaged beverage having a carbohydrate concentration as claimed. Claim 1 of U.S. '873 claims as a component (C) 0.0001-15 wt.% of a sweetener but fails to claim an amount of glucose and fructose as claimed. In view of applicants' demonstration of an unexpected improvement in color storage stability, such a generic disclosure of a sweetener fails to render obvious the claimed invention.

The provisional rejection of claims 1 and 3-10 under the judicially created doctrine of nonstatutory obviousness-type double patenting over claims 1-4, 8, 9, 10-14, 18, 21, 25-28 over copending application 11/258,892 in view of Ohishi et al. is respectfully traversed.

U.S. '892, in claim 3, claims a non-tea-based packaged beverage comprising 0.0001-20 wt.% of a sweetener. There is no disclosure of a carbohydrate composition as claimed. As applicants have provided evidence of an unexpected improvement in color tone stability resulting from the carbohydrate concentration as claimed, the claimed invention is clearly not



rendered obvious by the claims of U.S. '892 and withdrawal of this provisional ground of rejection is respectfully requested.

The provisional rejection of claims 1, 3-8 and 10 over claims 1-2 and 6-11 of copending application 10/583,556 in view of Ohishi et al., U.S. 2003/0077374 is respectfully traversed.

U.S. '556 fails to claim a packaged beverage having a carbohydrate concentration as claimed. Claim 2 of U.S. '556 claims a sweetener in an amount of 0.0001-20 wt.% but fails to describe the carbohydrate composition as claimed. As applicants have provided evidence of an unexpected improvement in color tone stability resulting from the claimed carbohydrate distribution, the claimed invention is clearly not obvious over these claims and accordingly withdrawal of the provisional ground of rejection is respectfully requested.

Withdrawal of the provisional rejections for obviousness-type double patenting is respectfully requested.

Applicants submit that this application is now in condition for allowance and early notification of such action is earnestly solicited.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.  
Norman F. Oblon



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Richard L. Chinn, Ph.D.  
Registration No. 34,305

Customer Number  
**22850**

Tel: (703) 413-3000  
Fax: (703) 413 -2220  
(OSMMN 08/07)